

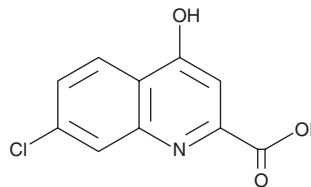
PRODUCT INFORMATION



7-Chlorokynurenic Acid

Item No. 33408

CAS Registry No.: 18000-24-3
Formal Name: 7-chloro-4-hydroxy-2-quinolinecarboxylic acid
Synonyms: 7-CKA, 7-CTKA, 7-chloro KYNA, NSC 149792
MF: C₁₀H₆ClNO₃
FW: 223.6
Purity: ≥95%
UV/Vis.: λ_{max}: 223, 250, 340 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

7-Chlorokynurenic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-chlorokynurenic acid in the solvent of choice, which should be purged with an inert gas. 7-Chlorokynurenic acid is slightly soluble in ethanol and DMSO.

Description

7-Chlorokynurenic acid is an NMDA receptor antagonist.¹ It selectively binds to the NMDA receptor glycine-binding site (IC₅₀ = 0.56 μM) over the NMDA-, quisqualate-, and kainate-binding sites (IC₅₀s = 169, 153, and >1,000 μM, respectively). Intra-dorsal hippocampal administration of 7-chlorokynurenic acid (3.2 μg per side) increases the number of errors in a three-panel runway test of working memory, an effect that can be blocked by the NMDA glycine-site co-agonist D-serine (Item No. 31197).² It also induces antidepressant-like activity in the forced swim test, novelty-suppressed feeding test, and a foot shock-based learned helplessness test in mice when administered at doses of 0.1 and 1 mg/kg.³

References

1. Kemp, J.A., Foster, A.C., Leeson, P.D., *et al.* 7-Chlorokynurenic acid is a selective antagonist at the glycine modulatory site of the N-methyl-D-aspartate receptor complex. *Proc. Natl. Acad. Sci. USA* **85**(17), 6547-6550 (1988).
2. Ohno, M., Yamamoto, T., and Watanabe, S. Intra-hippocampal administration of a glycine site antagonist impairs working memory performance of rats. *Eur. J. Pharmacol.* **253**(1-2), 183-187 (1994).
3. Zhu, W.-L., Wang, S.-J., Liu, M.-M., *et al.* Glycine site N-methyl-D-aspartate receptor antagonist 7-CTKA produces rapid antidepressant-like effects in male rats. *J. Psychiatry Neurosci.* **38**(5), 306-316 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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